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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,011	06/25/2003	Keitaro Suzuki	239312US0 DIV	2431
22850	7590	08/08/2006	EXAMINER	
C. IRVIN MCCLELLAND OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			METZMAIER, DANIEL S	
			ART UNIT	PAPER NUMBER
			1712	

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/603,011	Applicant(s) SUZUKI ET AL.	
	Examiner Daniel S. Metzmaier	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10 and 14-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10 and 14-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 10 and 14-18 are pending.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 23, 2006 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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3. Claims 10 and 14-18 are rejected under 35 U.S.C. 103(a) as obvious over Nissan Chemical Ind., Ltd, WO 98/39253, as evidenced by Watanabe et al, US 6,296,943. Watanabe et al '943 is a patent family member of Nissan Chemical and is used as translation evidence of the Nissan Chemical disclosure. The citations refer to those set forth in Watanabe et al '943, the disclosure which is considered to be the same or substantially the same in the Nissan Chemical reference.

The claims define an optical substrate with a cured film defined by the coating composition employed to coat said substrate. Said claims are deemed to be in product-by-process format and patentability is evaluated based on product-by-process format. The process limitations in product-by-process claims are only given patentable weight to the extent said process limitations would necessarily impart a patentable limitation to the resulting product. See MPEP 2113.

Nissan Chemical (column 5, lines 4 et seq) discloses optical elements derived from mixtures of (A) and (B) reading on the claimed compositions when viewed as a whole. Nissan Chemical (column 18, lines 1-13) discloses the hydrolysis of the components (A) and (B) are carried out in acidic media. Nissan Chemical (column 20, lines 40 et seq) discloses the addition of curing catalyst comprising organic acid salts and alkoxides of aluminum, zirconium or titanium. Preferred are the acetylacetoates of aluminum. Said salts or alkoxides in acid media would have been expected to have formed colloidal acidic oxides via at least some hydrolysis and condensation of the salts and/or alkoxides and would have coated the particles previously set forth as (B).

Nissan Chemical and Watanabe et al '943 (column 21, lines 9-14) further teaches the coatings may further contain the specific metal oxide particles so as to conform to the refractive index of various optical elements and include aluminum oxide, titanium oxide, antimony oxide, zirconium oxide, silicon oxide, cerium oxide, etc. Nissan Chemical (column 13, lines 19-27; column 20, lines 64-67) clearly further discloses the use of alkylamines.

Nissan Chemical (column 21, lines 60 et seq) further discloses the further coating the optical elements with an anti-reflective coating in a multilayer film.

To the extent the optical elements claimed differ as not disclosed with sufficient specificity in the Nissan Chemical reference, it would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to make optical elements within the teachings of the Nissan Chemical reference employing the disclosed additives for their disclosed advantageous additive properties taught in the Nissan Chemical reference.

Nissan Chemical is directed to optical elements made by a different method than applicants' product-by-process and said products have not been shown to be unobvious from those taught in the Nissan Chemical reference.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140

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F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 10 and 14-18 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 11-14 of U.S. Patent No. 6,296,943. Although the conflicting claims are not identical, they are not patentably distinct from each other because Watanabe et al '943 (column 21, lines 9-14) further teaches the coatings may further contain the specific metal oxide particles so as to conform to the refractive index of various optical elements and include antimony oxide and (column 13, lines 19-27; column 20, lines 64-67) clearly further discloses the use of alkylamines. Said disclosures are encompassed by the generic claims of '943 and are therefore indistinct regarding the optical element.

Response to Arguments

6. Applicant's arguments filed May 23, 2006 have been fully considered but they are not persuasive.

7. Applicants (page 2 of the above noted response) assert Watanabe et al '943 lacks a disclosure acidic oxide of the sols in the coating and the examiner is, in effect testifying thereto. This has not been deemed persuasive for the following reasons.

Initially, Watanabe et al '943 teaches composite primary sol particles comprising those instantly claimed. The claims do not define or limit the degree of coating, e.g., partial, degree thereof, or complete. The surface of the primary composite particles would be expected to have exposed species of the components of said composite oxide that are the same and would have the same groups. Said groups would have been expected to be the same. A compound and all of its properties are generally inseparable. *In re Papsech*, 315 F2d. 381, 137 USPQ 43, (CCPA 1963).

Furthermore, Watanabe et al '943 (column 21, lines 9-14) specifically discloses the further addition of fine particulate metal oxides including antimony oxide.

Watanabe et al '943 characterizes "fine" (column 1, lines 40-45) in the prior art background as 1 to 300 nm and (column 8, lines 20-27) in terms of the patented invention as 2-20 nm, which criticality of the particle size is disclosed. Watanabe et al '943 (column 8, lines 24-27) teaches particles larger than 20 nm decreases the transparency, which is undesirable. The terms "fine particle" as disclosed in Watanabe et al '943 would clearly lead one skilled in the art to particles having 1-20 nm, which reads on the claimed coating particles.

Watanabe et al '943 (examples) further discloses primary particles of 4-8 nm in a slight alkaline pH. Watanabe et al '943 (column 13, lines 19-27; and column 20, lines 64-67) further teach the addition of allyl amine and ethylamine (alkylamine) as bases.

While Watanabe et al '943 does not explicitly characterize the sol particles as coated with acidic oxides, the addition of at least the antimony and aluminum oxides

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under the disclosed near neutral/alkaline conditions, would have resulted in at least partial coating of the composite oxides.

Furthermore, the addition of antimony oxide would have been advantageous for the purpose of modifying the refractive index properties of the composition as taught in the Watanabe et al '943 reference. Under near neutral / alkaline conditions, the further addition of the antimony oxide or aluminum oxide would have resulted in surface acidic oxides.

Lastly, there is no evidence of record that said intermediate product imparts a patentable distinction to the final product, e.g., coating, that would have otherwise resulted from the mere addition of the antimony oxide taught in the Nissan Chemical and Watanabe et al '943 references.


8. Applicants (page 3) assert the specification as Comparative Example 3 describes the use of sols produced in the Watanabe et al '943 reference. Said Comparative Example 3 admittedly does not show coatings that are practically inferior but only slightly different. Said data is consistent with the conclusion that some acidic oxide surface groups would be expected for the composite oxide materials. Also, said data does not rebut the rejection based on the facts that Watanabe et al '943 clearly discloses the addition of fine particles of antimony oxide and that said fine particles would have been attracted to the basic surface groups of the composite oxide particles.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM